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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 09/681,139	Applicant(s) YAO ET AL.
	Examiner Christopher E. Lee	Art Unit 2189	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 February 2001</u> .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 January 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .	6) ☐ Other: .

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

In Paragraph 21, lines 5-6, the sentence states "The server can itself may a server appliance",

which does not carry a verb in it. Make the sentence be understandable. Appropriate correction is

required.

In Paragraph 24, line 8, substitute "installs" by --uninstalls--.

Drawings

2.   The drawings are objected to because the Figure 1 is missing in the drawings. And, there are two

same Figure 2s are in the drawing. A proposed drawing correction or corrected drawings are required in

reply to the Office action to avoid abandonment of the application. The objection to the drawings will not

be held in abeyance.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include

the following reference sign(s) not mentioned in the description: the reference sign 520 in Fig. 5 is not

used in the text disclosure. A proposed drawing correction, corrected drawings, or amendment to the

specification to add the reference sign(s) in the description, are required in reply to the Office action to

avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5.   Claims 10, 17 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

The claim 10 recites the subject matter "the logic" in line 8. There is insufficient antecedent basis for this subject matter in the claim. Therefore, the term "the logic" could be considered as --a logic-- since it is not clearly defined in the claims.

The claim 17 recites the subject matter "the appropriate driver" in line 3. There is insufficient antecedent basis for this subject matter in the claim. Therefore, the term "the appropriate driver" could be considered as --an appropriate driver-- since it is not clearly defined in the claims.

The claim 21 recites the subject matter "the first component" in line 1, and the subject matter "the at least one second component" in lines 1-2. There is insufficient antecedent basis for these subject matters in the claim. Therefore, the claim could be set as a dependent claim of the claim 20 since the undefined subject matters are clearly defined in the claim 20.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8.   Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US 6,263,387 B1] in view of Jau et al. [US 6,205,505 B1; hereinafter Jau].

Referring to claim 1, Chrabaszcz discloses a server (i.e., server system 100 of Fig. 1) comprising:

at least one port driver (e.g., network device driver 524 and mass storage device driver in Fig. 5), each

driver (i.e., device driver) corresponding to a port (i.e., slot 266 in Figs. 3 and 4) to which a port device

(i.e., adapter 310 of Fig. 4) can be connected (See col. 9, lines 8-9); and, an automatic plug-and-play

component (i.e., a process for hot add of a device on a slot in Fig. 6 and a process of automatically

configuring a server system in Fig. 8) designed to detect connection (See col. 9, lines 8-17) of a port

device (i.e., said adapter connected to said controllers for said peripheral devices) to a port (i.e., said slot)

having a corresponding driver (i.e., said device driver) selected (i.e., loaded) from said at least one port

driver (i.e., step 816 in Fig. 8; See col. 11, lines 55-57), said component without user intervention

automatically installing (i.e., configuring) an appropriate driver for said port device upon connection

thereof to said port (See col. 10, line 51 through col. 12, line 3), such that said device is accessible by

clients (i.e., client computers) communicatively coupled to said server (See col. 6, lines 1-7).

Chrabaszcz is silent that said automatic plug-and-play component is designed to detect disconnection of

said port device, and automatically uninstalling said appropriate driver upon disconnection of said port

device from said port, such that said port device is inaccessible by said clients.

Jau teaches a specification of USB interface (See col. 1, lines 56-58), wherein an automatic plug-and-play

component (i.e., PnP function in USB specification; See col. 1, line 62 through col. 2, line 4) is designed

to detect disconnection of a port device from a port (i.e., detect disconnection of a peripheral from a

personal computer, in fact, its port; See col. 2, lines 4-6), and automatically uninstalling (i.e., removing)

an appropriate driver (i.e., corresponding program for said peripheral) upon disconnection of said port

device from said port (See col. 2, lines 6-7), such that said port device is inaccessible by clients (i.e.,

users; See col. 2, lines 7-8; i.e., wherein in fact that avoiding the users from using the corresponding

programs to cause operational errors implies that said port device is inaccessible by clients).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said automatic disconnection, as disclosed by Jau, in said automatic plug-and-play component, as disclosed by Chrabaszcz, for the advantage of providing an avoidance of said clients (i.e., users) from using said port driver (i.e., corresponding program) to cause operational error (See Jau, col. 2, lines 7-8).

Referring to claim 2, Chrabaszcz teaches said port device is a printer (i.e., mass storage adapter 102, printer controller 120 and various printer 122 in Fig. 1).

Referring to claim 7, Chrabaszcz teaches said automatic plug-and-play component (i.e., a process for hot add of a device on a slot in Fig. 6 and a process of automatically configuring a server system in Fig. 8) retrieves a plug-and-play identifier (i.e., Device ID and Vendor ID) from said port device (i.e., adapter connected to controllers for peripheral devices) upon connection of said port device to said port (See col. 4, lines 24-32), and selects said appropriate driver based on said plug-and-play identifier (See col. 4, lines 32-35 and block 808 through block 818 in Fig. 8).

9.   Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US 6,263,387 B1] in view of Jau [US 6,205,505 B1] as applied to claims 1, 2 and 7 above, and further in view of Shih [US 6,509,981 B1].

Referring to claims 3-6, Chrabaszcz, as modified by Jau, discloses all the limitations of the claims 3-6, respectively, except that does not expressly teach said ports are a parallel port and a serial port, which has USB form factor or 1394 form factor.

Shih discloses a computer device (Fig. 5), wherein said computer device includes ports are a parallel port and serial ports, which have USB form factor and 1394 form factor (See col. 4, lines 7-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said computer device, as disclosed by Shih, in said server, as disclosed by Chrabaszcz, as modified by Jau, for the advantage of providing a popular high speed serial ports, i.e.,

USB and IEEE-1394, and a popular parallel port for a parallel-bus printer (See Shih, col. 4, lines 19-22 and Fig. 5).

10.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US 6,263,387 B1] in view of Jau [US 6,205,505 B1] as applied to claims 1, 2 and 7 above, and further in view of Pleso [US 6,009,480 A].

Referring to claim 8, Chrabaszcz, as modified by Jau, discloses all the limitations of the claim 8 except that does not teach installing said appropriate driver for said port device includes downloading said appropriate driver from the Internet.

Pleso discloses an integrated device driver, wherein installing an appropriate driver for a port device includes downloading said appropriate driver from the Internet (See col. 13, lines 25-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said downloading scheme, as disclosed by Pleso, in said server, as disclosed by Chrabaszcz, as modified by Jau, for the advantage of allowing and maintaining said port devices (i.e., peripheral devices) with the most current and compatible port device driver (i.e., peripheral device driver) software, which is disclosed at Pleso, col. 13, lines 33-35.

11.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US 6,263,387 B1] in view of Jau [US 6,205,505 B1] as applied to claims 1, 2 and 7 above, and further in view of Sanders [US 5,734,831 A].

Referring to claim 9, Chrabaszcz, as modified by Jau, discloses all the limitations of the claim 9 except that does not said server is a server appliance lacking at least a dedicated keyboard and a dedicated monitor.

Sanders discloses a server (i.e., SERVER 10 of Fig. 1) is a server appliance (i.e., headless server) lacking at least a dedicated keyboard and a dedicated monitor (See col. 3, line 66 through col. 4, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to have applied said headless server scheme with a remote interface computer, as disclosed by

Sanders, in said server, as disclosed by Chrabaszcz, as modified by Jau, for the advantage of said server is

fully administered and reconfigured from a remote location (See Sanders, col. 4, lines 2-3).

12.   Claims 10, 11 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chrabaszcz [US 6,263,387 B1] in view of Jau [US 6,205,505 B1] and Gaither et al. [US 6,195,650 B1;

hereinafter Gaither].

   Referring to claim10, Chrabaszcz discloses a computer program (i.e., operating system 304, hot-

plug user interface 302, hot-plug system driver 306 and adapter driver 308 in Fig. 4) for execution by a

processor (i.e., computer 101 of Fig. 1) of a server (i.e., server system 100 of Fig. 1) communicatively

coupled to one or more clients (See col. 6, lines 1-7), said computer program comprising: at least one port

driver (e.g., network device driver 524 and mass storage device driver in Fig. 5) corresponding to a port

(i.e., slot 266 in Figs. 3 and 4) to which a port device (i.e., adapter 310 of Fig. 4) can be connected (See

col. 9, lines 8-9); and, a monitor (i.e., a process for hot add of a device on a slot in Fig. 6 and a process of

automatically configuring a server system in Fig. 8, which is implemented on operating system 304, hot-

plug user interface 302 and hot-plug system driver 306 in Fig. 4) designed to monitor connection (See col.

9, lines 8-17) of a port device (i.e., said adapter connected to said controllers for said peripheral devices)

to a port (i.e., said slot) selected (i.e., loaded) from said at least one port driver (i.e., step 816 in Fig. 8;

See col. 11, lines 55-57), a logic causing without user intervention automatic installation (i.e.,

configuration) of an appropriate driver for said port device upon connection thereof to said port (See col.

10, line 51 through col. 12, line 3), such that said device is accessible by said clients (i.e., client

computers).

Chrabaszcz is silent that said monitor is designed to detect disconnection of said port device, and does automatic uninstallation of said appropriate driver upon disconnection of said port device from said port, such that said port device is inaccessible by said clients.

Jau teaches a specification of USB interface (See col. 1, lines 56-58), wherein a monitor (i.e., PnP function in USB specification; See col. 1, line 62 through col. 2, line 4) is designed to detect disconnection of a port device from a port (i.e., detect disconnection of a peripheral from a personal computer, in fact, its port; See col. 2, lines 4-6), and does automatic uninstallation (i.e., removal) of an appropriate driver (i.e., corresponding program for said peripheral) upon disconnection of said port device from said port (See col. 2, lines 6-7), such that said port device is inaccessible by clients (i.e., users; See col. 2, lines 7-8; i.e., wherein in fact that avoiding the users from using the corresponding programs to cause operational errors implies that said port device is inaccessible by clients).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said automatic disconnection, as disclosed by Jau, in said monitor, as disclosed by Chrabaszcz, for the advantage of providing an avoidance of said clients (i.e., users) from using said port driver (i.e., corresponding program) to cause operational error (See Jau, col. 2, lines 7-8).

Chrabaszcz, as modified by Jau, does not teach said computer program comprises at least one port class driver, each port class driver designed to pass signals to and receive signals from a corresponding said port driver.

Gaither discloses a method for virtualizing file access operations, wherein a computer program (i.e., operating system in Fig. 2; See col. 4, lines 31-35) comprises at least one port class driver (i.e., SCSI block Disk Class Driver 38 and IDE block Disk Class Driver 40 in Fig. 2), each port class driver designed to pass signals to and receive signals from a corresponding said port driver (i.e., IDE port 30 or SCSI port 32 in Fig. 2; See col. 4, line 63 through col. 5, line 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have implemented said method, as disclosed by Gaither, on said computer program (i.e., operating system, hot-plug user interface, hot-plug system driver and adapter driver), as disclosed by Chrabaszcz, as modified by Jau, so as said computer program to execute said monitor (i.e., system utility) in a user mode, and said device drivers (i.e., I/O system services) in a kernel mode (See Gaither, col. 4, lines 33-35), for the advantage of providing a method of virtualizing file access operations and other I/O operations in said computer programs (i.e., operating systems) by performing string substitutions upon a file paths or other resource identifiers to convert the virtual destination of an operation to a physical destination, which is disclosed at Gaither, col. 4, lines 17-28.

However, the recitation in the claim, that "a machine-readable medium having stored thereon a computer program" has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *See Kropa v. Robie, 88 USPQ 478 (CCPA 1951).*

Referring to claim 11, Chrabaszcz teaches said port device is a printer (i.e., mass storage adapter 102, printer controller 120 and various printer 122 in Fig. 1).

Referring to claim 14, Chrabaszcz teaches said monitor (i.e., a process for hot add of a device on a slot in Fig. 6 and a process of automatically configuring a server system in Fig. 8) is implemented as a service (i.e., a process for hot add of a device on a slot and a process of automatically configuring a server system are a type of operating system that generally is meant to support other programs, such as user applications, that are directly accessed by said client computers; See col. 6, lines 1-18).

Referring to claim 15, Chrabaszcz, as modified by Jau and Gaither, teaches said monitor (i.e., applications and system utility 16 of Fig. 2; Gaither) resides in a user mode, and each of said at least one

port class driver (i.e., Disk Class Driver 28 in I/O system services in Fig. 2; Gaither) resides in a kernel

mode, which is taught by Gaither at col. 4, lines 33-35.

Referring to claim 16, Chrabaszcz teaches said monitor incorporates monitoring logic (i.e.

process of automatically configuring a server system in Fig. 8) implemented as a state-transition system

(i.e., state-transition loop processing from state 800 depends on the conditions of states 804, 812, and 818

in Fig. 8).

Referring to claim 17, Chrabaszcz teaches said monitor (i.e., a process for hot add of a device on

a slot in Fig. 6 and a process of automatically configuring a server system in Fig. 8) retrieves a plug-and-

play identifier (i.e., Device ID and Vendor ID) from said port device (i.e., adapter connected to controllers

for peripheral devices) upon connection of said port device to said port (See col. 4, lines 24-32), and

selects an appropriate driver based on said plug-and-play identifier (See col. 4, lines 32-35 and block 808

through block 818 in Fig. 8).

Referring to claim 18, Chrabaszcz teaches said program (i.e., operating system 304, hot-plug user

interface 302, hot-plug system driver 306 and adapter driver 308 in Fig. 4) comprises a support

component (i.e., configuration manager 500 of Fig. 5) designed to pass signals (i.e., configuration signals

) from said monitor (i.e., a process for hot add of a device on a slot in Fig. 6 and a process of

automatically configuring a server system in Fig. 8, which is implemented on operating system 304, hot-

plug user interface 302 and hot-plug system driver 306 in Fig. 4) to said at least one port class driver and

vice-versa (See Fig. 5 and col. 9, lines 20-24).

Referring to claim 19, Chrabaszcz, as modified by Jau and Gaither, teaches said support program

(i.e., configuration manager 500 of Fig. 5; Chrabaszcz) resides in a user mode (See Gaither, col. 4, lines

33-35; i.e., wherein in fact that applications and system utilities are executed in user mode, and I/O

system services are executed in kernel mode implies said support program (i.e., not related with I/O

system services, but with managing adapters) resides in a user mode, not in a kernel mode).

13.   Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US

6,263,387 B1] in view of Jau [US 6,205,505 B1] and Gaither [US 6,195,650 B1] as applied to claims 10,

11 and 14-19 above, and further in view of Shih [US 6,509,981 B1].

Referring to claims 12 and 13, Chrabaszcz, as modified by Jau and Gaither, discloses all the

limitations of the claims 12 and 13, respectively, except that does not expressly teach said ports are a

parallel port and a serial port.

Shih discloses a computer device (Fig. 5), wherein said computer device includes ports are a parallel port

and serial ports (See col. 4, lines 7-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to have included said computer device, as disclosed by Shih, in said server, as disclosed by

Chrabaszcz, as modified by Jau and Gaither, for the advantage of providing a popular high speed serial

ports, i.e., USB and IEEE-1394, and a popular parallel port for a parallel-bus printer (See Shih, col. 4,

lines 19-22 and Fig. 5).

14.   Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US

6,263,387 B1] in view of Jau [US 6,205,505 B1] and Gaither [US 6,195,650 B1] as applied to claims 10,

11 and 14-19 above, and further in view of Slaughter et al. [US 6,202,147 B1; hereinafter Slaughter].

Referring to claim 20, Chrabaszcz, as modified by Jau and Gaither, discloses all the limitations of

the claim 20 including said support component (i.e., configuration manager 500 of Fig. 5; Chrabaszcz)

designed to pass signals (i.e., configuration signals) from said monitor (i.e., a process for hot add of a

device on a slot in Fig. 6 and a process of automatically configuring a server system in Fig. 8, which is

implemented on operating system 304, hot-plug user interface 302 and hot-plug system driver 306 in Fig.

4; Chrabaszcz) to one of said at least one port class driver and vice-versa (See Chrabaszcz , Fig. 5 and col.

9, lines 20-24), except that does not teach said support component comprises a first component and at

least one second component, said first component designed to determine a number of ports of the server

and instantiate a number of said at least one second component equal to the number of ports, each second

component designed to pass said signals.

Slaughter discloses a platform-independent device drivers, wherein a support component (i.e., security

mechanism; See Figs. 7A-B and col. 9, lines 11-27) comprises a first component (i.e., bus manager 710 in

Figs. 7A-B) and at least one second component (i.e., IC bus manager 1 708, IC bus manager 2 712, ... IC

bus manager n 714 in Fig. 7A-B), said first component (i.e., bus manager) designed to determine a

number of ports and instantiate a number of said at least one second component equal to the number of

ports (See col. 9, lines 16-25; i.e., wherein in fact that each IC bus manager is assigned to one, and only

one, of the device drivers, and appears to its assigned device driver as bus manager implies that said first

component (i.e., bus manager) designed to determine a number of ports and instantiate a number of said at

least one second component equal to the number of ports) of a server (i.e., computer system 100 of Fig.

1), each second component designed to pass signals (See col. 9, lines 25-27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to have included said support component (i.e., security mechanism), as disclosed by Slaughter, in

said support component, as disclosed by Chrabaszcz, as modified by Jau and Gaither, for the advantage of

providing avoidance of the problems of errant or rogue said port drivers (i.e., device drivers) as such

drivers cannot gain access to said port device (i.e., system resource; See Slaughter, col. 9, lines 29-31).

Referring to claim 21, Slaughter teaches each of said first component and said at least one second

component is implemented as an object (See col. 4, line 61 through col. 5, line 5).

15.   Claim 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrabaszcz [US

6,263,387 B1] in view of Jau [US 6,205,505 B1] and Gaither [US 6,195,650 B1] as applied to claims 10,

11 and 14-19 above, and further in view of Wang et al. [US 6,085,249 A; hereinafter Wang].

Referring to claims 22 and 23, Chrabaszcz, as modified by Jau and Gaither, discloses all the

limitations of the claims 22 and 23, respectively, including said support component is able to pass signals

from said monitor to said at least one port class driver and vice-versa, except that does not expressly teach said support component is able to pass signals from an external monitor not residing at said server to said at least one port class driver and vice-versa.

Wang teaches a support component (i.e., software for server functionality; See col. 4, lines 25-26) is able to pass signals (i.e., digital media) from an external monitor (i.e., Web Server System 109 of Fig. 1), which is implemented as a web component (See col. 4, lines 27-30), and not residing at a server (i.e., Server Computer System 111 of Fig. 1) to at least one port class driver and vice-versa (See col. 4, lines 24-26 and col. 5, lines 65+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said external monitor (i.e., Web Server System) with web server functionality, as disclosed by Wang, in said server, as disclosed by Chrabaszcz, as modified by Jau and Gaither, so said support component as to coupled with said external monitor for the advantage of providing said clients (i.e., client computers) with appropriate web browsing software, view HTML pages provided by said external monitor (i.e., web server system), which is disclosed at Wang, col. 4, lines 27-30).

16.   Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lach [US 6,363,452 B1].

        Referring to claim 24, Lach discloses a state transition system (i.e., state transitioning of switch device 502 of Fig. 5 under control of hot plug controller 302 of Fig. 3) comprising: a first state (i.e., state C in Fig. 6) in which a device driver is not installed (i.e., because the slot is still isolated in this state; See col. 9, lines 21-23) and a plug-and-play identifier has been detected from a device (i.e., adapter card is inserted into the slot, and signals to CPU that the card is ready to be connected; See col. 9, lines 23-25) connected (i.e., inserted) to a port (i.e., slot); a second state (i.e., state D in Fig. 6) in which said device driver is installed (i.e., driver is loaded; See col. 6, lines 47-49) and said plug-and-play identifier has been detected from said device (i.e., adapter card is inserted into the slot, then the card is connected; See col. 9, lines 24-25) connected (i.e., inserted) to said port (e.g., slot 1 is connected to Primary PCI bus; See col. 9,

lines 24-26); a third state (i.e., state A in Fig. 6) in which said device driver is not installed (i.e., no driver

has been loaded) and said plug-and-play identifier has not been detected from said device (i.e., no adapter

card has been inserted into slots) connected (i.e., inserted) to said port (i.e., all busses and slots are

isolated; See col. 9, lines 16-17); and, a fourth state (i.e., state B after removing card from slot in Fig. 6)

in which said device driver is installed (i.e., driver had been loaded at state D in Fig. 6) and said plug-and-

play identifier has not been detected from said device (i.e., adapter card fails testing; See col. 9, lines 15-

20) connected (i.e., inserted) to said port (in fact, even though the adapter card fails testing, the device

driver is still installed, which had been installed at state D), wherein said states are transitioned among

one another based on a set of transitions (See col. 9, line 12-16) comprising: a first state-to-third state

transition (i.e., state C to state A via state D in Fig. 6) based on an event of no detection of said identifier

(i.e., no detection of the adapter card because of card removal; See col. 6, line 50 through col. 7, line 3);

a second state-to-second state transition (i.e., state D or state J to state G in Fig. 6; in fact, a new adapter

card is added after an adapter card had been connected to a slot) based on an event of detection of a new

identifier (i.e., detection of a new adapter card; See col. 9, lines 31-45 and col. 9, lines 62 through col. 10,

line 9); a second state-to-fourth state transition (i.e., state D to state B via state A in Fig. 6) based on said

event of no detection of said identifier (i.e., no detection of the adapter card because of card removal); a

third state-to-second state transition (i.e., state A to state D via states B and C in Fig. 6), and a fourth

state-to-second state transition (i.e., state B to state D via state C in Fig. 6) based on an event of detection

of said identifier (i.e., detection of an adapter card; See col. 6, lines 23-49).

Lach does not expressly teach a manual driver installation / uninstallation event.

The Examiner takes Official Notice that a manual driver installation / uninstallation (i.e., manual loading /

unloading of device driver) event is well known to one of ordinary skill in the art of computer

configuration.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included said manual driver installation / uninstallation event to said state transition system, as disclosed by Lach, so as that a first state-to-second state transition and a second state-to-first state transition (i.e., state transition from state C to state D, vice versa), and a third state-to-fourth state transition and a fourth state-to-third state transition (i.e., state transition from state A to state B, vice versa) based on said manual driver installation / uninstallation event (i.e., with manually loading / unloading device driver, which is well known in the art of computer configuration), since it would have allowed for greater flexibility of computer configuration.

However, the recitation in the claim, that "a machine-readable medium having stored thereon as a computer program for execution by a processor a monitoring logic for automatic device plug-and-play without user intervention that is implemented as a state transition system" has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *See Kropa v. Robie, 88 USPQ 478 (CCPA 1951).*

Conclusion

17.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

As regards Hot Plug and Plug and Play features,

Web Address: http://www.microsoft.com/windows2000/en/server/help/increased_availability.htm

Published by Microsoft Corporation, about Plug and Play on Windows 2000, which was the last updated February 28, 2000.

Simonich et al. [US 6,301,665 B1] disclose security methodology for devices having Plug and Play capabilities.

Richman et al. [US 5,655,148 A] disclose method for automatically configuring devices including a network adapter without manual intervention and without prior configuration information.

Sahgal et al. [US 5,881,252 A] disclose method and apparatus for automatically configuring circuit cards in a computer system.

Lin et al. [US 6,345,319 B2] disclose method for installing Plug-N-Play device by copying INF files to a corresponding directory and deleting device ID and all related device class of an original device.

As regards Device Drivers on Layered Driving Model,

Rust et al. [US 6,405,145 B1] disclose instrumentation system and method which performs instrument interchangeability checking.

Cabrera et al. [US 5,931,935 A] disclose file system primitive allowing reprocessing of I/O requests by multiple drivers in a layered driver I/O system.

Shah et al. [US 6,470,397 B1] disclose systems and methods for network and I/O device drivers.

As regards Loading Device Driver across Network,

Fleming, III [US 6,473,854 B1] discloses method for automatically retrieving and installing device drivers across a network.

Perlman et al. [US 6,269,481 B1] disclose automatic selecting and downloading device drivers from a server system to a client system that includes one or more devices.

As regards Web Access features,

Venkatraman et al. [US 5,956,487 A] disclose embedding WEB access mechanism in an appliance for user interface functions including a WEB server and WEB browser.

As regards State Transition General,

Norin et al. [US 5,787,247 A] disclose replica administration without data loss in a store and forward replication enterprise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on 703-305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Christopher E. Lee
Examiner
Art Unit 2189

cel/ *CEL*
August 8, 2003

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